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### **REMARKS**

## I. Status Summary

Claims 1-113 are pending in the present application. Claims 3, 8-10, and 26-113 have been withdrawn from further consideration under 37 C.F.R. 1.142(b) by the U.S. Patent and Trademark Office (hereinafter "the Patent Office"). Claims 107-113 have been provisionally rejected. Claims 1, 2, 4, 11, 14, and 15 stand rejected. Claims 1, 2, 4-7, and 11-25 presently stand objected to by the Patent Office.

Claims 26-52, 61-77, and 85-100 have been cancelled herein. Claims 1, 2, 4, 7, 14, 18, and 22 have been amended. No new matter has been added. Therefore, upon entry of Amendment A, claims 1, 2, 4-7, and 11-25 will remain pending in the subject application.

Reconsideration of the application as amended and further in view of the remarks set forth herein below is respectfully requested.

#### II. Interview Summary

Examiner Nyeemah Grazier conducted Telephonic Interviews with the Applicants on October 13, 2005 and December 13, 2005. Applicants sincerely appreciate Examiner Grazier's time and consideration in participating in the Telephonic Interviews. Applicants' summary of the Telephonic Interview of October 13, 2005 was included in the Response to Restriction Requirement submitted to the Patent Office on October 27, 2005. With respect to the Telephonic Interview of December 13, 2005, Examiner Grazier and attorney Jeffery Childers discussed potential allowable subject matter based upon the Examiner's preliminary search. It was agreed that Examiner Grazier would issue an Official Action describing any rejections of the claims made in light of the prior art.

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# III. Scope of the Elected Subject Matter

Based upon the remarks of Section IV.B. of the Official Action of December 28, 2005, applicants understand that the scope of the elected subject matter as defined by the Patent Office includes compounds of Formulae (I-IV) of claims 1, 2, 4-7, and 11-25:

wherein  $X_1$  is oxygen;  $X_2$  is CH;  $X_3$  is NH;  $X_4$  is nitrogen;  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_4$  are independently selected from the group consisting of H, alkyl, alkoxy, halide, alkylhalide, amidine, nitro, and amino; and A is imidazole, *i.e.*, A is a group having the structure:

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Claims 1, 14, 18, and 22 have been amended herein to reflect the withdrawal of non-elected subject matter. The withdrawal should not be construed as surrender of the non-elected subject matter. Applicants hereby reserve the right to file one or more divisional patent applications with claims directed to the withdrawn subject matter of claims 1, 14, 18, and 22.

With regard to the elected subject matter as set forth by the Patent Office, applicants respectfully request that the Patent Office consider rejoinder of the subject matter wherein A of the compound of Formulae (I-IV) is:

Applicants note that these three groups and the imidazole group all pertain to an amidine or a substituted amidine. For example, the imidazole group is a substituted amidine wherein both nitrogen atoms are bonded to the same alkylene group. In the event that the Patent Office rejoins this subject matter, applicants also respectfully request that the Patent Office rejoins claims 3, 9, and 10. Additionally, applicants respectfully request that the Patent Office consider rejoinder of the subject matter wherein X<sub>3</sub> is NR<sub>9</sub>, wherein R<sub>9</sub> is alkyl as well as H.

Further, applicants respectfully request the rejoinder of claim 8, which has been sua sponte withdrawn by the Patent Office as being drawn to non-elected subject matter. Applicants respectfully submit that this withdrawal appears to have been made in error. Applicants believe that the subject matter of claim 8, the compound having the structure:

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is encompassed by the elected subject matter as set forth by the Patent Office, as the compound has a structure of Formula (I) wherein  $X_1$  is O,  $X_2$  is CH,  $X_3$  is NH,  $X_4$  is N, and A is imidazole.

Finally, as claims 1, 2, 4-7, and 11-25 are believed to be in condition for allowance, applicants request that method claims 53-60, 78-84, and 101-113 be rejoined at this time.

## IV. Double Patenting Rejection

Claims 107-113 have been provisionally rejected under 35 U.S.C. § 101 for claiming the same invention as claims 107-113 of co-pending U.S. Patent Application Serial No. 11/262,427 (hereinafter "the co-pending '427 application"). The Patent Office further contends that the subject matter claimed in the instant application is fully disclosed in the co-pending application.

Preliminarily, applicants respectfully submit that the co-pending '427 application is a properly filed divisional application of the instant application. Under 35 U.S.C. 121, divisional applications cannot be used as a reference against subsequent divisional applications or against the original application upon which the divisional application is based. Therefore, applicants submit that the fact that the subject matter claimed in the instant application is disclosed in the '427 application is moot.

Further, applicants respectfully submit that both the instant application and the co-pending '427 application have been subjected to Election/Restriction Requirements. In the instant application, as discussed hereinabove, the Patent Office has acknowledged that the elected subject matter includes certain compounds of Formulae (I-IV). With regard to the co-pending '427 application, applicants refer the Patent Office to the Official Action of February 9, 2006, made in the case of the co-pending '427 application. As described in the Official Action of February 9, 2006, applicants provisionally elected compounds of Formula (V) during a telephonic interview with Examiner Grazier on February 1, 2006. Thus, applicants believe that claims 107-113 in

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the instant application are no longer co-extensive in scope with claims 107-113 in the co-pending 427 application.

Accordingly, applicants respectfully request that the provisional rejection of claims 107-113 under 35 U.S.C. § 101 be withdrawn. Applicants further respectfully request that upon allowance of the compound claims of the instant application, method claims 107-113 be rejoined and allowed.

## V. Obviousness-Type Double Patenting Rejections

Claims 1, 2, 4, 11, 14, and 15 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3 of U.S. Patent No. 6,613,787 (hereinafter "the 787 patent") and over claims 1 and 4 of U.S. Patent No. 6,867,227 (hereinafter "the '227 patent"), both to Wilson et al. The Patent Office contends that, while the conflicting claims are not identical, they are not patentably distinct from each other since both recite similar compounds and compositions. The Patent Office contends that one of skill in the art would be motivated to make and use the presently claimed compounds based upon the expectation that similar compounds are generally expected to have similar properties.

After careful consideration of the Patent Office's rejections and the reasons therefor, applicants respectfully traverse the rejection and offer the following remarks.

Applicants respectfully submit that claims 1 and 14 have been amended herein such that groups R<sub>1</sub>-R<sub>4</sub> of compounds of Formulae (I-II) are independently selected from H, alkyl, alkoxy, halide, alkylhalide, nitro, and amino groups. Thus, claim 1 as amended is directed to 2-phenyl-5-benzimidazoyl furan compounds wherein the benzimidazole ring is substituted with an imidazole group, the imidazole group being the only amidine-containing moiety peripherally substituted on the 2-phenyl-5-benzimidazoyl furan core structure. Claim 14 as amended is directed to 2-phenyl-5-benzimidazoyl furans wherein the phenyl ring is substituted by an imidazole group, the imidazole group, likewise, being the only amidine-containing moiety substituted on the 2-phenyl-5-benzimidazoyl core structure. Further, the subject application specifically discloses six compounds

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comprising a 2-phenyl-5-benzimidazoyl furan core with a single amidine or substituted amidine substituent (e.g., an *N*-isobutyl amidine group or an imidazole group): DB456, DB457, DB458, DB459, DB771, and DB772. See Table 1, page 8.

In contrast, Formula (I) of claims 1 and 3 of the '787 patent has the following structure:

Formula (I) of the '787 patent

Thus, claims 1 and 3 of the '787 patent are drawn to 2-phenyl-5-benzimidazoyl furans wherein <u>both</u> the phenyl ring and the benzimidazole are substituted by amidine or substituted amidine groups.

Formula (I) of the '227 patent has the structure:

$$\begin{array}{c|c} R_1 \\ R_{13} \\ R_{14} \\ R_{9} \\ R_{9} \\ \end{array}$$

Formula (I) of the '227 patent

Applicants submit that this formula also includes two amidine or substituted amidine groups covalently bonded to a tri-aryl core structure.

Accordingly, applicants respectfully submit that claims 1 and 14 have been distinguished over claims 1 and 3 of the '787 patent and claims 1 and 4 of the '227 patent. Applicants submit that the claims that depend from claims 1 and 14, claims 2, 4, 11, and 15, have also been distinguished. Thus, applicants respectfully request the withdrawal of the obviousness-type double patenting rejection of claims 1, 2, 4, 11, 14, and 15 at this time.

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## VI. Provisional Obviousness-Type Double Patenting Rejections

Claims 1, 2, 4, 11, 14, and 15 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 10, and 11 of co-pending U.S. Patent Application Serial Nos. 11/035,627 (hereinafter "the '627 application") and 10/653,677 (hereinafter "the '677 application").

Preliminarily, applicants note that the '677 application has now issued as the '227 patent, discussed hereinabove with reference to the non-provisional obviousness-type double patenting rejections. Thus, applicants submit that the provisional obviousness-type double patenting rejections with regard to the '677 application are moot.

With regard to the rejections based on claims 1, 2, 10, and 11 of the '627 application, applicants respectfully submit that in the response to the Election/Restriction Requirement filed in the Patent Office on October 26, 2005, in the case of the '627 application, applicants elected a species drawn to compounds of Formula (I) of the '627 application wherein X is NH and Y is N. Claim 1 of the present application as currently amended recites compounds of Formula (I) wherein  $X_1$  is O and  $X_2$  is CH. Therefore, claim 1 and its dependent claims 2, 4, and 11 are drawn to compounds containing a central furan ring. Claim 14 of the present application as currently amended recites compounds of Formula (II) wherein  $X_1$  is O and  $X_2$  is CH. Thus, claim 14 and its dependent claim, claim 15, are drawn to compounds containing a central furan ring.

Further, applicants respectfully submit that the compounds of claims 1, 2, 10 and 11 of the '627 application contain two peripheral amidine or substituted amidine groups. As discussed hereinabove, claims 1 and 14 of the instant application are directed to 2-phenyl-5-benzimidazole furan compounds wherein either the phenyl ring or the benzimidazole ring, but not both, are substituted by a substituted amidine group (for example, an imidazole). As the structure of Formula (I) of the '627 application positively indicates the presence of two amidine or substituted amidines, applicants submit that

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the mono-imidazole substituted compounds of the instant application are not obvious variants of the compounds of the '627 application. One of skill in the art would not be motivated by the '627 application to prepare compounds containing a single imidazole substituent group, such as the compounds recited by claims 1 and 14 of the instant application.

Thus, applicants respectfully submit that claims 1, 2, 4, 11, 14, and 15 are drawn to compounds that are structurally distinct and non-obvious compared to the compounds which are currently encompassed by the elected subject matter of the '627 application.

## VII. Objections

The Patent Office has objected to claims 2, 4-7, 11-13, 15-17, 19-21, and 23-25 as being dependent from rejected base claims. It is believed that the amendments made herein to independent claims 1 and 14 have placed claims 1 and 14 in condition for allowance. Further, applicants respectfully note that the Patent Office has not presented a rejection of independent claims 18 and 22. Thus, applicants submit that the objection to claims 2, 4-7, 11-13, 15-17, 19-21, and 23-25 has been addressed and that these claims are in condition for allowance.

The Patent Office has further objected to claims 1, 2, 4-6, and 11-25 as containing non-elected subject matter. As discussed hereinabove in Section III, claims 1, 14, 18, and 22 have been amended herein to withdraw non-elected subject matter. Applicants submit that the amendments withdrawing non-elected subject matter from independent claims 1, 14, 18, and 22 effectively withdraws the non-elected subject matter from the claims depending from the independent claims, *i.e.*, claims 2, 4-6, and 11-25. Additionally, claim 2 has been amended to eliminate redundancy based on the withdrawal of the non-elected subject matter. As recited hereinabove, the withdrawal of the non-elected subject matter should not be construed as surrender of the non-elected subject matter. Applicants reserve the right to file one or more divisional patent

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applications with claims drawn to the withdrawn subject matter of claims1, 2, 4-6, and 11-25.

In addition to amendments made to withdraw non-elected subject matter, applicants note that clarifying amendments also have been made to claims 1, 14, 18, and 22. Specifically, claims 1 and 18 have been amended to remove the recitation of R<sub>5</sub>, which is not a possible variable in the structures of Formula (I) and Formula (III). Claims 14 and 22 have been amended to remove the recitation of R<sub>4</sub> and R<sub>5</sub>, which are not possible variables in the structures of Formula (II) and Formula (IV). Claim 7 has been amended to correct punctuation by the addition of a concluding period. Further, claims 1, 4, 14, 18, and 22 have been amended to correct the imidazole structure by adding an H to one of the ring nitrogen atoms.

## VIII. Allowable Subject Matter

The Patent Office has indicated that the allowable subject matter is the compound of Formula (I). The Patent Office has further indicated that compounds of Formulae (II-IV) would be allowable if the claims "were amended around the art, for example if R<sub>3</sub> is not hydrogen or methyl." See Official Action at Section VII, page 15.

Applicants sincerely appreciate the Patent Office's indication of allowable subject matter. However, applicants are unclear from the Patent Office's remarks, cited directly hereinabove, as to the identity of the art being referenced against the instant claims. Additionally, applicants also believe that these remarks are inconsistent with applicants' understanding of the Patent Office's rejections of the instant claims, particularly those related to claims 1, 2, 4, and 11, which relate to compounds of Formula (I). Thus, applicants respectfully ask that the Patent Office reconsider the instant claims in light of the amendments and remarks herein.

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## CONCLUSIONS

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

# **DEPOSIT ACCOUNT**

The Commissioner is hereby authorized to charge any additional fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

JENKINS, WILSON, TAYLOR & HUNT, P.A.

Date: June 28, 2006

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421/60/18/2/2

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